

The detection and determination of diene hydrocarbons with a conjugated system of double bonds. I. V. I. Kislav, J. Applied Chem. (U. S. S. R.) 14, 110-172 (1941); translated in *Foreign Petroleum Techn.* 9, 344 (1941). The Kunkmann method (C. A. 37, 7889) cannot be used universally for the detg. of diene hydrocarbons with conjugated double bonds. The excessively low values of the Kaufmann diene no. are due to side reactions of the polymerizations of dienes. Diene hydrocarbons are distinguished from monoolefins by the generation of considerable amounts of HBr when brominated in a soln. of  $\text{CCl}_4$ . The Mellinley method is suitable for detection of dienes alone or in mixts. of various hydrocarbons. II. V. I. Kislav and A. V. Shpailo, J. Applied Chem. (U. S. S. R.) 14, 104-111 (1941); translated in *Foreign Petroleum Techn.* 9, 350 (1941).—Bromination in  $\text{CCl}_4$  is specific for diene hydrocarbons with conjugated double bonds and is accompanied by the generation of considerable amounts of halogen acids. Hydrocarbon chains with separated double bonds are brominated similarly to olefins, with an insignificant septn. of halogen acid. The sensitivity limits of the bromination reaction for mixts. of olefins with 1,3-dienes is 1% of the latter, while for mixts. of soln. hydrocarbons with dienes this limit is at 0.3% of dienes. The experiments were carried out with linear oil and mixts. of cyclohexene, decalin, and vld. kerostane and decadene, by the Mellinley method of detg. I nos. A. A. Hochtingh

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Characteristics of  $\alpha,\beta$ -unsaturated ketones. II. V. I. Rulov and I. I. Ralther, *J. Gen. Chem. (U. S. S. R.)* 13, No. 13 (1943) (English summary); cf. *C. A.* 39, 30385.... It was shown that the displacement of ketones by alkylidene from  $\alpha,\beta$ -unsat. ketones is connected with the preliminary hydrolytic cleavage of the latter into its components. BaII, treated with mesityl oxide in the presence of dil. NaOH, yielded small amts. of benzylidenecetone and benzylidenemethyl oxide, the latter being isolated as the tetrabromide, m. 118° (from BaOH). The reactions were conducted by prolonged standing at about 10°, with a longer period not clearly increasing the yield of benzylidenecetone. Me<sub>2</sub>CO was shown to be inert to condensation on treatment with piperidine acetate or prolonged heating on a steam bath; the same result was obtained when Me<sub>2</sub>CO was used. However, 25 g. BaII, 30 g. Me<sub>2</sub>CO, 6 g. piperidine and 6 g. AcOH yielded, after 20 hrs. heating, 71% benzylidenecetone, m. 41.8°, while similar reaction with mesityl oxide gave crude benzylidenemethyl oxide, m. 173.0°, identified as the tetrabromide. Thus, piperidine acetate may be recommended for aldehyde-ketone condensations.  
G. M. Kosolapoff

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Synthesis of new hydrocarbons with a conjugated system of double bonds. IV. V. A. Egorov, I. P. Vlachimirov, M. S. Kostikina and I. T. Walkter. *J. Gen. Chem. (U. S. S. R.)*, 13, 818-22 (1943) (English summary); cf. *C. A.*, 39, 4709 and following abstr.—Benzyl (from 14.8 g. MeI) was added dropwise over 3 hrs. to 13.4 g. malonylidenecetone in Et<sub>2</sub>O at -15°; after standing overnight and decompr., by ice and NH<sub>4</sub>Cl, there was obtained 16% 2-methyl-1,3-decadiene, bp 88°,  $\eta_2^{\text{D}}$  1.4422,  $d_2^{20}$  0.7718. The product, heated for 20 hrs. in a steam bath in a sealed tube with malic anhydride in toluene, yielded an adduct, apparently of the trimer, which could not be reduced to the cryst. state. Similar reaction using EtMgBr gave a mixt. of 3-methyl-3,6-dekadienes and 2-ethyl-1,3-decadiene, bp 96-104°,  $\eta_2^{\text{D}}$  1.4510,  $d_2^{20}$  0.7908; heating with malic anhydride gives a mixt. of adducts of the enone and the dimer of the hydrocarbon; in the form of a heavy oil. A similar prepn. using iso-AmMgBr gave a mixt. of 2-isopropyl-1,3-decadiene and 2,6-dimethyl-4,8-decadienes, bp 120-34°,  $\eta_2^{\text{D}}$  1.4181,  $d_2^{20}$  0.7806. G. M. Kostikoff

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1ST AND 2ND FLOORS

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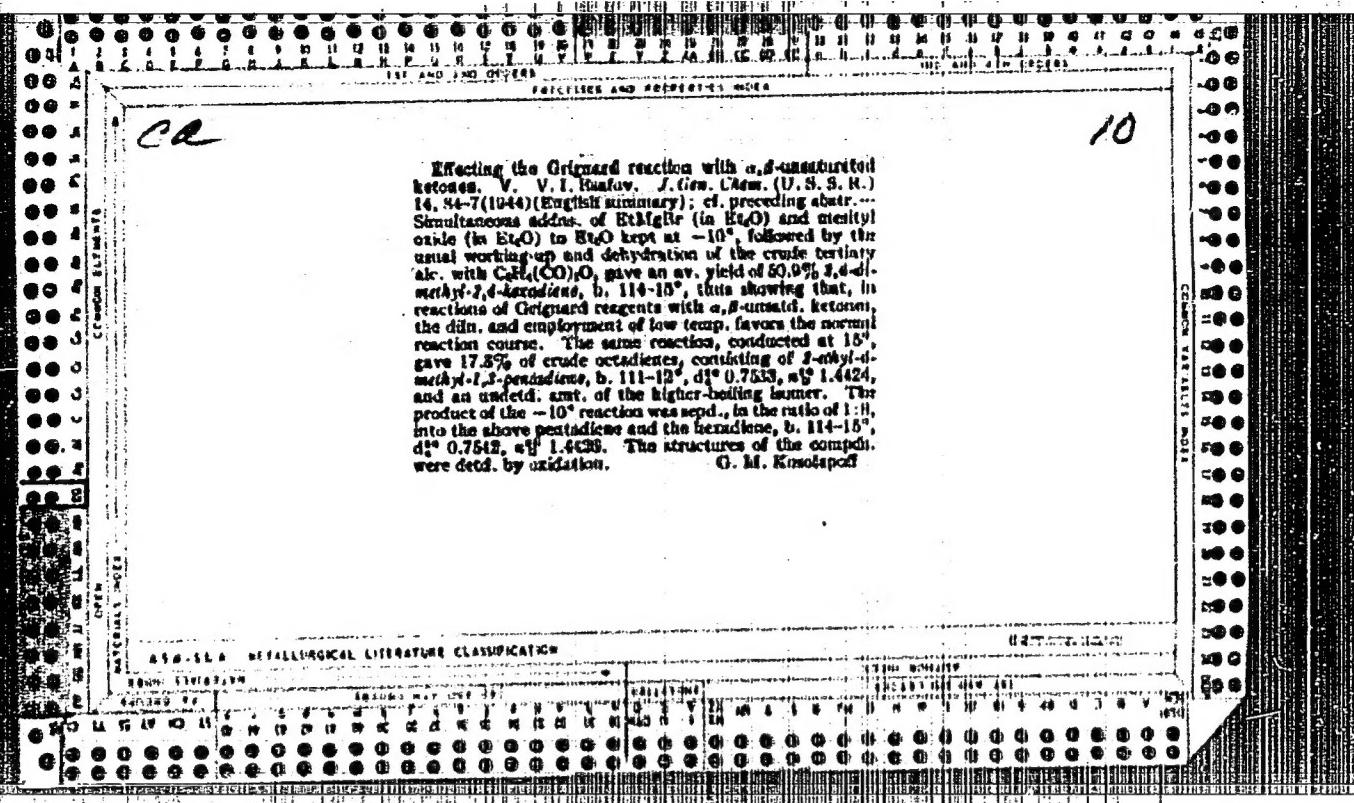
**Detection of diene hydrocarbons with a conjugated double-bond system.** E. J. V. L. Eadon. *J. Applied Chem. (U. S. S. R.)* 16, 523-53 (1943) (English summary); cf. *C. A.*, 39, 2220. On the basis of more accurate work it is shown that the reaction of bromination in  $\text{CCl}_4$  is specific only for those dienes which have 1, or better 2, side chains connected to carbons of the conjugated system; in the latter case considerable dilution is involved and 50-60% of Br is used for these side reactions. Di- and tri-butylbenzenes are characterized by this behavior among the olefin hydrocarbons. The iodination reaction is specific for dienes of normal and branched structures and these are characterized by some 80% conversion of I into III by the side reactions; di- and tri-isobutylbenzenes are characterized likewise. The I, no. procedure of Hückel-Weller is most accurate for diene analysis. O. M. J. Conant?

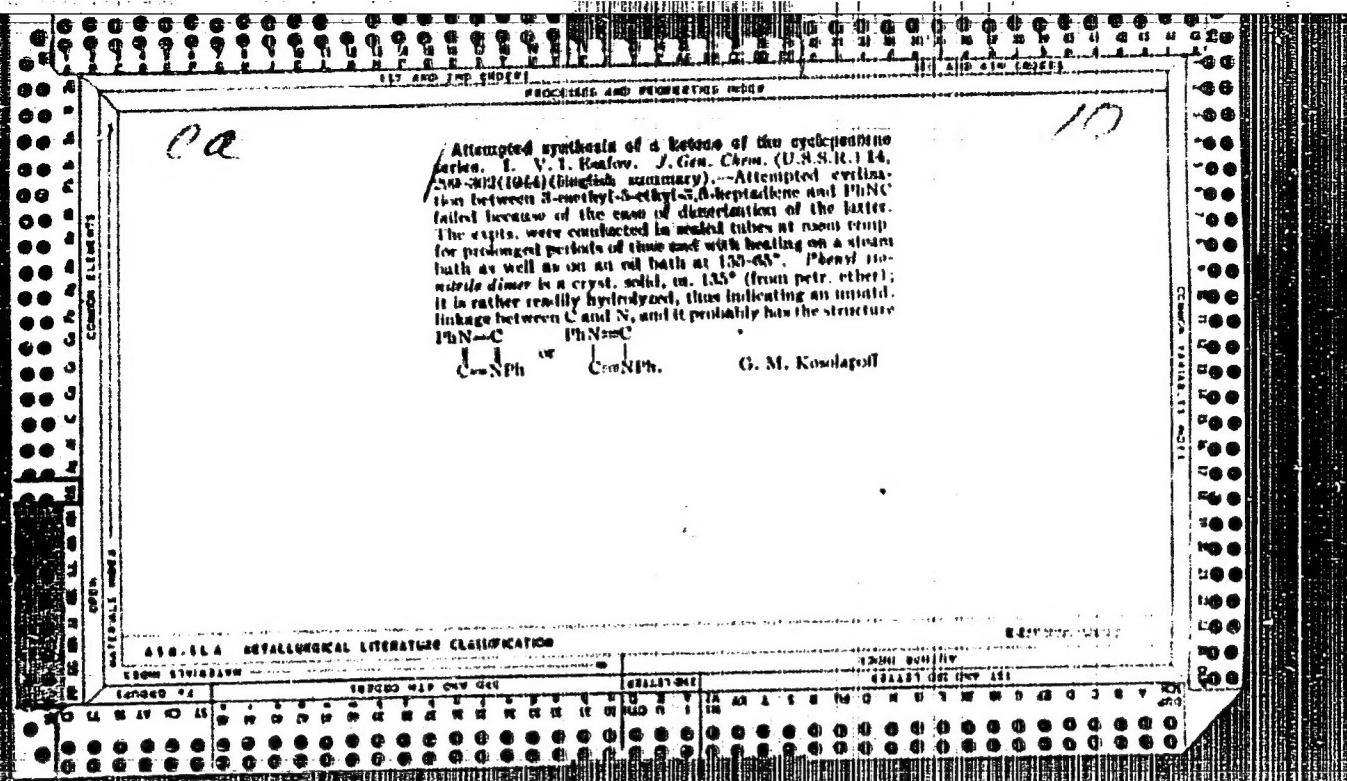
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100-110 METALLURGICAL LITERATURE CLASSIFICATION

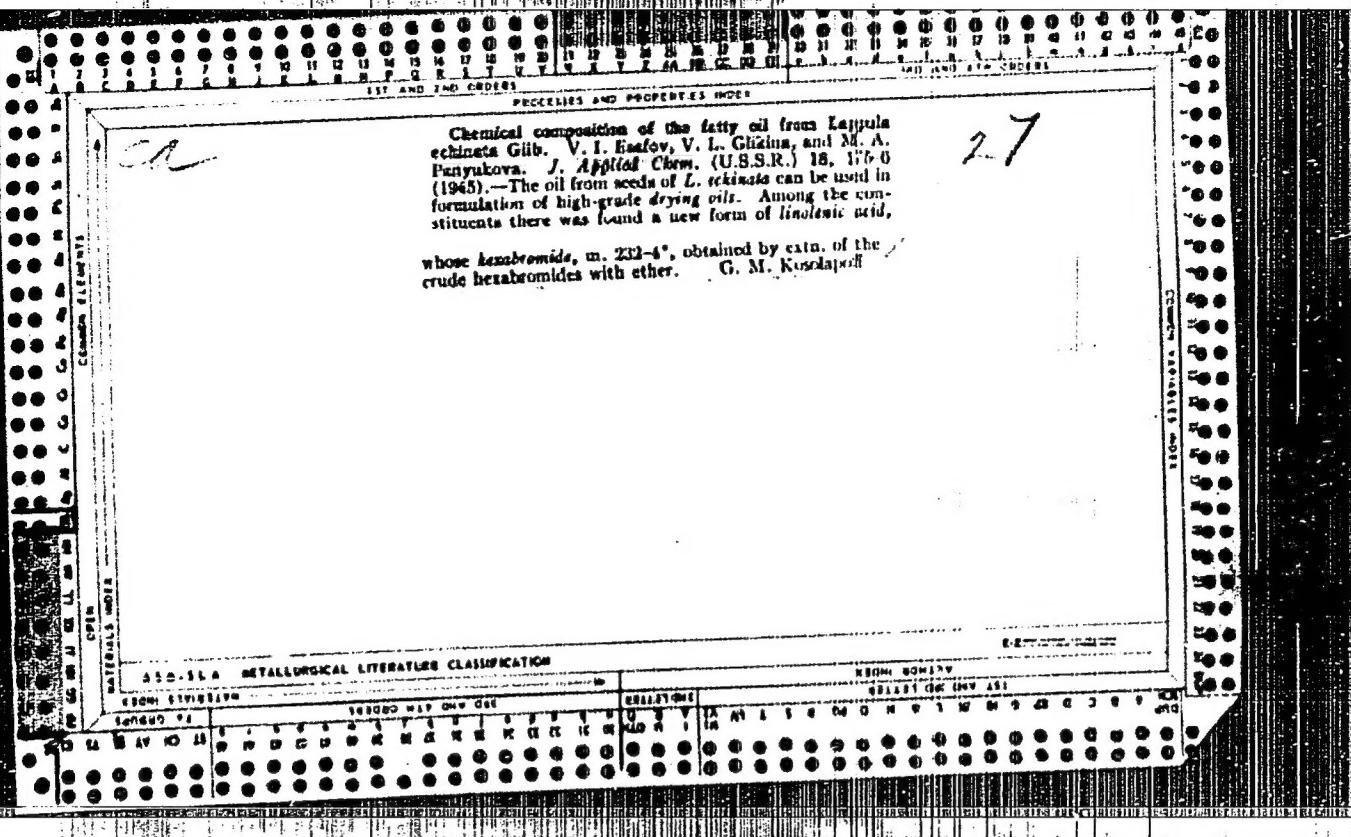
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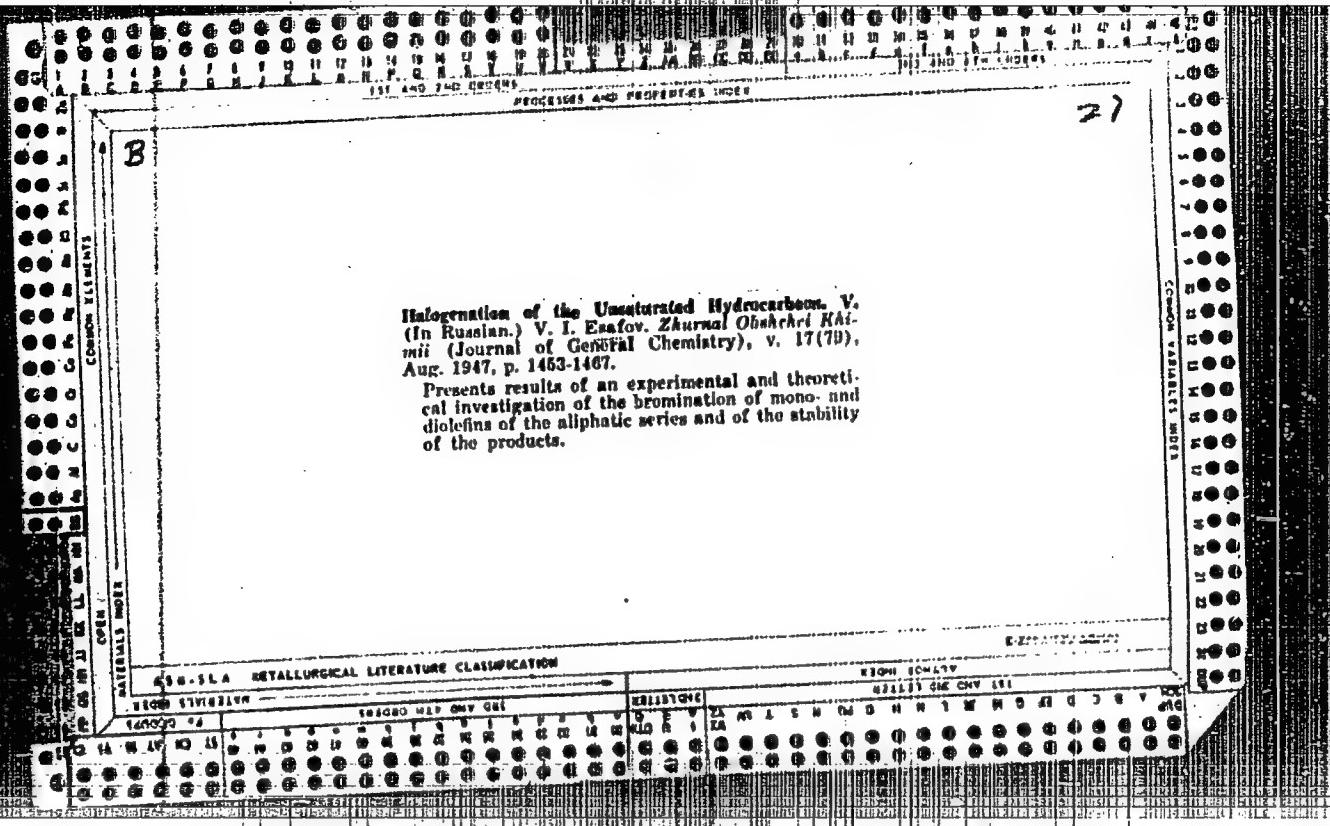
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COMMON ELEMENTS	INTERNAL STATE	<p>Halogenation of unsaturated hydrocarbons. IV. V. I. Basov (Sverdlovsk State Univ.). <i>J. Gen. Chem. (U.S.S.R.)</i> 13, 1001-6 (1943); cf. <i>C.A.</i> 39, 4704. —The MacMillan method of iodine no. detn. is recommended for detection of structures at the quaternary C atoms having a double bond, such as in olefins or in dienes. The amt. of such hydrocarbons in liquid-phase cracking products is shown to increase with rising b.p. of the fractions. A hypothesis for halogenation and hypobromination of olefins is proposed according to which the halogenating mol. is first fixed to the double bond, then the atomic bonds are cleaved, and the halogens are transformed into <i>stabilized nascent</i>; this explains the possibility and the high reaction rate of such halogens with other materials present in the reaction mixt. Isobutylene (1.00 g.) and 8.0992 g. kerosene fraction with iodine no. 6.0 were mixed and 4.7083 g. of the <i>reagent</i>, was treated for 0.5 hr. with 2.5 l. freshly prepnd. Cl water, and the org. layer was sepd., washed with dil. soda soln., dried, and analyzed for Cl and unreactn.; 19% of the isobutylene did not enter into reaction, thus showing direct chlorination of isobutylene; extension of the reaction to 1 hr. gave 17% unreacted isobutylene. The supposition that hypochlorination is accompanied by direct chlorination is also supported by the higher Cl content than calcd. for an HOCl addn. product. Bromination of 2,4-dimethyl-2,4-hexadiene in <i>CCl<sub>4</sub></i> at 0° for 0.5-2.0 hrs. showed that 8.8-20.2% of total utilized Br is used for transformation into HBr. G. M. Konoplev</p>																																																																																																	
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157 AND 158 CARBONS		159 AND 160 CARBONS	
Properties noted		Properties noted	
which appears to correspond most closely to an adduct of the hydrocarbon dimer; treatment of the condensate at room temp. with 16 atm. heating to $-10^{\circ}$ gave an only product, contg. 37.71% Ag; finally, the diene (2 g.) reacted with 2.4 g. quinone in 10 cc. $\text{H}_2\text{O}$ to $10^{\circ}$ 20 hrs., gave 0.8 g. $\text{C}_6\text{H}_5\text{CO}_2$ m. 132°, which readily reacts with 1 g. $\text{LiAlD}_4$ in 10.5 g. $\text{PbCl}_2\text{CHCOMg}$ , bns. 104-7°, $d_4^{20} 0.9316$ , n <sub>D</sub> <sup>20</sup> 1.4447, in 100 cc. $\text{H}_2\text{O}$ cooled to $-10^{\circ}$ to 1 g. $\text{Mg}$ and 13 g. $\text{MgI}_2$ to 30 hr.; $\text{LiAlD}_4$ was added over 6 hrs.; treatment as above gave 16% 2-methyl-1,3-dicarboxylic acid, bns. 127-8°, n <sub>D</sub> <sup>20</sup> 0.7452, n <sub>D</sub> <sup>20</sup> 1.4432, while a doubled amt. of $\text{MnMgI}$ gave 29.5% e; the Diels-Alder adduct with maleic anhydride gave a Ag salt, contg. 33.95% Ag (corresponding to the adduct of the dimer or trimer). To 17.0 g. $\text{PbCl}_2\text{CHCOMg}$ in 100 cc. $\text{H}_2\text{O}$ , cooled to $-10^{\circ}$ to $-15^{\circ}$ , 1% $\text{MgI}_2$ (from 0 g. $\text{Mg}$ and 38 g. $\text{PhI}_2$ ) in 80 cc. $\text{H}_2\text{O}$ was added over 6 hrs. to yield, upon dehydration as above, but at reduced pressure, and vacuum distn. over Na, and finally atomization, over Na, 2.2 g. 2-pentyl-1,3-dicarboxylic acid, bns. 234-7°, $d_4^{20} 0.9358$ , n <sub>D</sub> <sup>20</sup> 1.4420; the maleic anhydride adduct (prepd. at $120^{\circ}$ ) gave a Ag salt, contg. 40.97% Ag, which was fairly close to $\text{LiAlD}_4$ . G. M. K.			
Aluminum chloride-catalyzed addition of 1 <i>tert</i> -butyl chloride to propylene. Verle A. Müller (General Motors Corp., Detroit, Mich.). J. Am. Chem. Soc. 69, 1704-8 (1947). - When 1.23 moles of $\text{C}_3\text{H}_6$ is bubbled into 1 mole tert-BuCl (1) and 2 g. $\text{AlCl}_3$ at $-10^{\circ}$ , at such a rate that the absorption of the gas is complete, 8-10% of the $\text{C}_3\text{H}_6$ and 25-30% 1 are recovered and 70% of a butyl chloride			
159-164 METALLURGICAL LITERATURE CLASSIFICATION		160-164 METALLURGICAL LITERATURE CLASSIFICATION	
From literature		From literature	

fraction (II) is formed. A curve shows the effect of reaction temp. and quantity of catalyst. About 45% of II is composed of 2-chloro-4,4-dimethylpentane; the remainder is principally 3-chloro-2,3-dimethylpentane with a small quantity of the 3-Cl isomer. These were identified by reaction with the Grignard reagent and comparison of the phys. properties and derivs. with known compds. The principal fraction of the higher-boiling mist, obtained is composed chiefly of dicyl chlorides which were not further identified. At higher reaction temps. and when more catalyst was used, the reaction was more complex; the amt. of II decreased and the primary addn. product was converted almost entirely into the rearranged product; the quantity of higher-boiling product obtained increased; the quantity of lower-boiling side-reaction products increased from a negligible to a significant quantity. 2,3-Dimethyl-3-pentanol yields a phenoxyether, m. 48.5-9°; that from 4,4-dimethyl-3-pentanol m. 52-3°.

C. J. West



ESSAFOV, V. I.

"On the Attempt to Synthetize the Ketones of the Cyclopentene Series. II"  
(p. 1518)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1947, Vol. 17, No. 8

PA 64/49T19

YESAFOR, V. L.

USSR/Chemistry - Diene Synthesis Jun 49  
 Chemistry - Grignard Reaction

"Prominating and Isolating New Diene Hydrocarbons With Conjugate Double Bonds," T. I. Yesafor, Lab of Org Chem, Ural State U, Sverdlovsk, 14 pp

"Zhur Obshch Khim" Vol XIX, No 6 - p.1063

Gives synthesis of 2, 6-dimethylheptadiene-1, 3; 3-methyloctadiene-2, 4; 2-tertiary-butyl-4, 5, 5-trimethylhexadiene-1, 3; and 2, 3, 4, 5-tetramethylhexaene-2, 3. Physicochemical constants of 2, 6-dimethyloctadiene-1, 6 are more precise, and yield of 2, 4-

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USSR/Chemistry - Diene Synthesis Jun 49  
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dimethylpentadiene-1, 3 is improved. Studies Grignard reaction of three following systems:

(1) 3-methylheptene-3-on-5 and  $\text{C}_2\text{H}_5\text{MgI}$ ; (2)  
 4-dimethylhexene-3-on-5 and  $\text{C}_2\text{H}_5\text{MgBr}$ , and  
 (3) butyldiene-methylpropylketone and  $\text{C}_2\text{H}_5\text{MgBr}$ .

Describes tertiary alcohols, 2, 6-methyloctane-4-ol-6 and 3, 4, 5-trimethylheptene-4-ol-3. Shows that in the dehydration of  $\alpha, \beta$ -unsaturated tertiary alcohols, having in the presence of carbinol the groups  $\text{CH}_3$  and  $\text{C}_2\text{H}_5$ , activity is chiefly caused by the H-atom of ethyl. Submitted 9 Sep 47.

64/49T19

CA

The characteristics of  $\alpha,\beta$ -unsaturated ketones. IV.  
V. I. Esakov. J. Gen. Chem. U.S.S.R. 19, 1100-18  
(1949) (Engl. translation).—See C.A. 44, 5793a.  
E. J. C.

CH

**Characterization of  $\alpha,\beta$ -unsaturated ketones. IV.** V. I. Basov, Zhur. Obshchel Khim. (J. Gen. Chem.) 19, 1118-24 (1949); cf. C.A. 39, 9181. — Summarization of the previous data (C.A. 35, 39581; 40, 64032; 44, 10016) shows that the degree of conjugation of C:C and C:O links decreases the reactivity of unsatd. ketones; increased mass of R bound to the CO group decreases the extent of conjugation, and the same takes place with the R attached to the terminal C of the C:C link. Two satd. radicals on the latter C atom decrease the conjugation even more, and the action of  $\alpha$ -Me-Et combination is greater than that of di-Me or  $\alpha$ -Me and *tert*-Bu. Introduction of a satd. R on the 2nd C atom, with 2 radicals on the 1st C atom, gives the max. lowering of the conjugation. The iodination of the unsatd. ketones may serve to show the structural types by increase of the iodine no. with increased no. of side chains from the C atoms of the conjugated

system; bromination in  $CCl_4$  can also be used similarly, as the iodine no. of aldin. decreases with an increased no. of radicals bound to the conjugated system. The upper conjugation limit is given by vinyl ketones and the lower limit lies with the compds. having 2 quaternary C atoms in the C:C link. The ketones used (the methods of prepn. will be given in later paper) were: *butylideneacetone* (I),  $b_{10}$  163-8°,  $d_4^{20}$  0.8520,  $n_D^2$  1.4124; *butylideneethyl ketone* (II),  $b_{10}$  175-7°,  $d_4^{20}$  0.8613,  $n_D^2$  1.4479; *butylidene-methyl propyl ketone* (III),  $b_{10}$  183-7°,  $d_4^{20}$  0.8540,  $n_D^2$  1.4450 (probably contains some 3-methyl-3-hepten-2-one); *enanthylideneacetone* (IV),  $b_{10}$  100-10°,  $d_4^{20}$  0.8473,  $n_D^2$  1.4480; *isooamylideneacetone* (V),  $b_{10}$  174-8°,  $d_4^{20}$  0.8470,  $n_D^2$  1.4400; *meetyl oxide* (VI),  $b_{10}$  129-30°,  $d_4^{20}$  0.8602,  $n_D^2$  1.4446; *3-methyl-3-hepten-5-one* (VII),  $b_{10}$  164°,  $d_4^{20}$  0.8591,  $n_D^2$  1.4421; *3,3-dimethyl-3-hexen-5-one* (VIII),  $b_{10}$  157-8°,  $d_4^{20}$  0.8585,  $n_D^2$  1.4415; *3-ethyl-4-methyl-3-hepten-2-one* (IX),  $b_{10}$  107-91°,  $d_4^{20}$  0.8543,  $n_D^2$  1.4430; *2,2,5,6,6-penta(methyl-4-hepten-3-one)* (X),  $b_{10}$  202-3°,  $d_4^{20}$  0.8525,  $n_D^2$  1.4401; *benzylideneacetone* (XI),  $m.$  43.6°; and *beatylideneethyl ethyl ketone* (XII),  $m.$  40°. The iodination was run by aldin. of the ketone to 10 ml. EtOH, rinsing with 10 ml. BrOH, addn. of 25 ml. EtOH-iodine soln. and, after shaking, 200 ml.  $H_2O$ .

followed by shaking and letting stand 5 min. or longer, and titration of the excess iodine with thiosulfate; while III is calcd. from the reaction with 10 ml. 2% KIO<sub>3</sub> and a 2nd titration with thiosulfate; brominations were done in CCl<sub>4</sub>, the mixts. allowed to stand 30 min. after mixing, and the HBr generated calcd. similarly from the reaction with KI and KIO<sub>3</sub>. In 5 min. I gave an iodine no. of 3.5-8.0 with 0.9-6.1%; III formation, while a 1370-min. reaction gave 27.0-32.2 and 79.1-83.5%, resp.; II in 5 min. gave 6.4-6.1 iodine no. and 20.1-32.4% III, while 1320 min. gave 25.7-19.7 and 67.3-78.8%, resp.; III in 5 min. gave 24.5-6.2 and 10.8-18.0%, resp. (longer runs not made); XI in 5 min. gave 5.1-3.0 iodine no. (HI not reported) while 1350 min. gave 15.1-18.6 and 15.8-17.0%, resp.; XII in 5 min. gave 8.8-5.9 and 35.6-7.0%, resp.; VI gave in 5 min. 3.2-6.5 iodine no. and no HI cited, while 1740 min. gave 106.4 and 44.0% HI, resp.; X in 5 min. gave 4.8-6.1 iodine no. and 33.1-44.0% HI; VII in 5 min. gave 30.6-4.5 iodine no. and 21.6-5.4% HI, while 1700 min. gave 150.7-3.8 and 69.2-64.0%, resp.; VIII in 5 min. gave 90.3-89.2 and 69.0-5.4%, resp., while in 1410 min. it gave 198.8-204.4 and 80.1-79.0%, resp.; IX in 5 min. gave 109.7-8.7 and 82.6-72.3%, resp.; IV in 5 min. gave 30.8-8.3 and 40.2-2.0%, resp. The bromination expts. gave the following nos. of substitution and addn., resp.: I 17-32 and 194-6; II 21-7 and 185-90; III 49-7 and 157-81; IV 17-14 and 102-55; XI — and 161; XII 6-9 and 135-6; VII 11-10 and 249-6; X 33-19 and 114-16; VIII 179-87 and 119-14; VIII 312-36 and 19-18; IX 223-13 and 50-64. The yields of Grignard reactions with the above ketones, cited from previous papers (references given above), are also affected by the extent of conjugation, but the results must be interpreted with care since 1,4-addn. is also possible, although the generally higher yields are secured, with systems having a

low degree of conjugation, with allowance being made for the ease of enolization. V. V. I. Ruzov and V. V. Sengorovskaya. *Ibid.* 17(3) 3.—1-Itylidesacetone (I) has the highest degree of conjugation of unsat. in the RCH: CHAc series, i.e., increase of R increases the independence of the ethylene bond. It does not react in aq. alc. soln. with 0.1 N iodine, while with 0.2 N soln. the iodine no. is but 1.57% of theory, and even a 0.6 N soln. gives but 2.30% iodine no. (of theory); the butyldiene analog gives 1.53, 4.39, and 17.76% of the theoretical iodine no. under the same conditions. Best prepns. of I: 850 ml. Me<sub>2</sub>CO and 700 ml. 1.4% aq. NaOH treated at 0° with 120 g. AcH in 280 ml. H<sub>2</sub>O, precooled to -2° over 6 hrs., let stand overnight at 0°, neutralized with AcOH, and wtd. with NaCl, gave on extn. with Et<sub>2</sub>O and distn. in the presence of a crystal of iodine, 18.6% of the product, *b.p.* 119-21°, *d*<sub>4</sub><sup>20</sup> 0.8814, *n*<sub>D</sub><sup>20</sup> 1.4339. Bromination of I at 0° in CCl<sub>4</sub> gives 98% of the theoretical uptake, even with twice the theoretical amt. of Br; no HBr is evolved. G. M. Kosolopoff

In 2/50T30

YESAF'Y, V. I.

USSR/Chemistry - Alcohols  
Synthesis

Jul 49

"The Synthesis of Tertiary Alcohols Using Camphor  
as a Base," I., V. I. Yesaf'Y, N. I. Novikov,  
Lab of Org. Chem., Ural State U., Sverdlovsk, 62 pp  
"Zhur. Obshch. Khim." Vol. XIV, No. 7

Yield of tertiary methylborneol, synthesized by  
interaction of camphor and CH<sub>3</sub>Li, is decreased  
at high temperatures chiefly because of enoliza-  
tion of camphor. At 150°, enolization of camphor  
is accompanied by formation of secondary ~~compounds~~  
containing camphor, latter reaction being chief  
cause of a reduced yield of tertiary alcohol

2/50T30

USSR/Chemistry - Alcohols  
Synthesis (Contd)

Jul 49

When synthesis is carried out at -150° C. At high  
temperatures chief secondary reaction is reduc-  
tion of camphor into borneol. Submitted  
29 Mar 48.

2/50T30

CA

Characterization of  $\alpha,\beta$ -unsaturated ketones. VI.  
V. I. Esafoy, (Ural State Univ., Sverdlovsk). Zhur. Obrabotka Khim. (J. Gen. Chem.) 20, 1050-7(1950); cf. C.I. 44, 6810d.— $\alpha,\beta$ -Unsatd. ketones with normal structure are more readily hydrolyzed with 0.01 N than with 0.1 N NaOH; ketones similar to mesityl oxide behave in the reverse manner. Such gradation of reactivity may be used in the characterization of ketones. Ketones analogous to trialkylvinyl ketone, i.e. R<sub>3</sub>C:CCOR, are even more resistant to hydrolysis. In the 1st series 0.1-0.2-g. samples were heated in ampuls with H<sub>2</sub>O, 0.01 or 0.1 N NaOH (10 ml.) 2 hrs. at 100°, and the CH<sub>3</sub>I reaction on 10-ml. aliquots used as the relative measure of iodine consumption, calcd. on the starting material. In a 2nd series the alk. iodine soln. was allowed to react with the 10-ml. aliquot for 15 sec., 1, 6, or 15 min. so as to give a measure of the abs. amts. of the reacted ketones. The results follow.  $\text{PCl}_3:\text{CHCOMe}$ : in H<sub>2</sub>O 01.33% reacted, in 0.01 N NaOH 80.91%, in 0.1 N 73.5%.  $\text{C}_6\text{H}_5\text{CH}=\text{CHCOMe}$ , 60.3, 81.0, 71.71%, resp. Mesityl oxide, 44.68, 75.43, 80.78%.  $\text{EtCOMe}:\text{CHCOEt}$ , 43.21, 60.16, 62.10%.  $\text{EtCOMe}:\text{CMeCOMe}$ , 37.08, 37.40, 46.59%. The ketones with normal structure have a higher degree of conjugation than occurs in branched-chain analogs and this is held to be the reason for their more easy cleavage.

G. V. Kondratenko

CA

7

use of the Iodiform reaction in the analysis of some organic compounds... V. I. Kovalyov and N. M. Stafeva (A. M. Gor'kiy Ural State Univ., Sverdlovsk, U.S.S.R.). *Zhur. Anal. Khim.*, 6, 195-210 (1951). -The Iodiform reaction, i.e., the reaction of compds. contg. the group  $\text{CH}_2\text{CO}-$  or  $\text{CH}_2\text{CH}(\text{OH})-$  with I followed by hydrolysis and formation of  $\text{CHI}_2$  was pos. also with  $\alpha,\beta$ -unsatd. ketones and their corresponding ketols not having these groups but capable of yielding acetaldehyde or satd. methyl ketones upon hydrolysis, e.g., 3-methyl-3-heptene-3-one and 4-octene-3-one. Therefore, the data, based on  $\text{CHI}_2$  reaction of  $\alpha,\beta$ -unsatd. methylenes and of their  $\beta$ -ketols which upon hydrolysis yield 2 mole of satd. methyl ketone or aldehydes and methyl ketone is inaccurate. M. Hersh

USSR/Chemistry - Diene Hydrocarbons

Apr 52

"Bromination and Iodoxidation of 1,1-Dialkylbutadiene-1,3." Part VIII," V. I. Yesafov, Lab of Org Chem., Urul State U

"Khimi Obshch Khim" Vol XXII, No 4, pp 604-611

Debromination of dialkyl allyl carbinols in presence of iodine proceeds in 2 directions with the formation of diene hydrocarbons both with isolated bonds of the conjugated system of double bonds. The yield of the latter is the lower, the lower the degree of hydrogenation of the allyl group attached to the carbonyl C-atoms. In 1,1-dimethylbutadiene-1,3,

224T36

contrast, to allyl-isoprophenyl and hexadiene-2,4, the double bonds are less strongly conjugated, and the bromination or iodoxidation proceeds more fully. Tertiary esters with an allyl radical split at the bond between the allyl radical and the C-atom of the carbonyl radical.

YESAFOV, V.I.

224T36

YESAPOV, V.I.

Role of Russian chemists in developing methods of synthesis by  
means of zinc organic compounds. Trudy Inst. int. est. i tekhn. vol. 6:  
318-346 '55. (MLIA 9:5)  
(Zinc organic compounds)

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001962920002-0

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001962920002-0"

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962920002-0"

YESAFOV, V.I.

Chemical structure of C<sub>12</sub>H<sub>14</sub> and synthesis of new phenylated  
diene (1,3) hydrocarbons. Part 7. Zhur. ob. khim. 27 no.10:2667-2675  
O '57. (MIRA 11:4)

1.Ural'skiy gosudarstvennyy universitet.  
(Chemical structure) (Hydrocarbons)

AUTHOR:

Yesafov, V. I.

79-2d-4-17/69

TITLE:

Investigation of the Thermal Decomposition of Magnesium Iodide Ethers (Issledovaniye termicheskogo razlozheniya effirov magnitoga magniya)  
I. On the Chemistry of Oxonium Compounds  
(I. Khimii oksoniyevykh soyedineniy)

PERIODICAL:

Zhurnal Otechetey Khimii, 1958, Vol. 28, Nr 5,  
pp. 1212-1218 (USSR)

ABSTRACT:

The present investigation aimed at determining the degree of the binding stability of the ether molecules of the mentioned compounds; for this also the method of thermal decomposition was used which has to be preferred in the given case to other purely chemical methods. It was found that the ethers form diethers with magnesium iodide and this with a weak binding of the magnesium with the oxygen of the ether molecules whereby they decompose into thermal decomposition to magnesium iodide and ether, it showed that the ethers with regard to their capability to form various kinds of magnesium iodide diethers, differ from each other. Some ethers form one and the same magnesium iodide

Card 1/5

Investigation of the Thermal Decomposition of Magnesium Iodide Ethers. /C-28-5-17/69

### I. On the Chemistry of Oxonium Compounds

In addition, even though it was formed from magnesium iodide, the decomposition of a mixture of magnesium and iodine. The second ether group yields magnesium iodide diethers of two kinds. The first is obtained of magnesium iodide as such, the other from a mixture of iodine and magnesium or by displacement from the ether ether from  $MgI_2 \cdot 2(C_2H_5)_2$ . Ethers with light primary radicals are displaced from  $MgI_2 \cdot 2(C_2H_5)_2$  by ethers with heavy primary radicals. The thermal decomposition of the magnesium iodide diethers of the second kind with aliphatic ethers can occur either in a formation of olefins and alkyl iodide with one ether molecule and iodine atom taking part in the chemical reactions. The second iodine atom remains strongly bound to the magnesium. It was further shown that in the thermal reaction of the magnesium iodide-ethers of the second kind with ~~fat~~ aromatic ethers such as alkyls phenols and resinous masses form. One molecule of the fat amyl ether separates in free state. The breaking of a solid chemical bond of magnesium to the oxygen

Card 2/3

Investigation of the Thermal Decomposition of Magnesium Iodide Ethers.

I. On the Chemistry of Oxonium Compounds

of the ~~an~~ ether molecule in the magnesium iodide diether of the second kind proves its oxonium nature. From a scheme for the thermal decomposition of the magnesium iodide diether of the second kind was proposed. There are 6 papers, 5 of which are Soviet.

ASSOCIATION: Ukrainsky gosudarstvenny universitet  
(Ukrainian State University)

SUBMITTED: May 6, 1967

Card 4/4

AUTHOR: Yesafov, V. I. 79-26-5-18/69

TITLE: Investigation of the Thermal Decomposition of the Reaction Products of Dioxane With Magnesium Iodide-Diether , Magnesium-Iodide and the Mixture of Magnesium and Iodine (Izuchenie termicheskogo razlozheniya produktov vzaimodeystviya dioksana s diefiratom yodistogo magniya, yodistym magniyem i smes'yu magniya s yodom )II. On the Chemistry of Oxonium Compounds (II. K khimii oksoniyevykh soyedineniy)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5, pp. 1218 - 1221 (USSR)

ABSTRACT: After it was found that ethers with magnesium iodide yield compounds of the formula  $MgJ_2 \cdot 2ROR$  which on heating decompose again to their initial products, it was of interest to investigate analogous compounds containing dioxane. Above all it was found that in the action of dioxane on  $MgJ_2 \cdot 2(C_2H_5)_2O$  and  $RMgHal \cdot 2(C_2H_5)_2O$  (Reference 2) a complete analogy exists. The dioxane displaces equimolecularly the ethyl ether from these compounds. Different from the ethers, the compound

Card 1/3

79-28-5-1E/69

Investigation of the Thermal Decomposition of the Reaction Products of  
Dioxane With Magnesium Iodide-Diether, Magnesium Iodide and the Mixture of  
Magnesium and Iodine . II. On the Chemistry of Oxonium Compounds

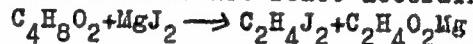
MgJ<sub>2</sub> with dioxane, MgJ<sub>2</sub>.2C<sub>4</sub>H<sub>8</sub>O<sub>2</sub>, on heating separates only half of the dioxane contained in it, the other half suffering decomposition. Thus the oxygen atoms of dioxane have a greater capability to form oxonium salts than the ethers, and they yield more stable oxonium compounds. The most typical oxonium compound of dioxane is obtained in its reaction with a mixture of magnesium and iodine. This product must be regarded as oxonium salt of symmetrical (formula I) or asymmetrical structure (II). The question if these salts form at the same time, or if first salt (I) is formed which then converts to salt (II) remains unsettled. It is only clear that in salt (I) if it remains unchanged on heating the β,β'-diiodine-diether would have to be found among the decomposition products, which was not observed. The experimental results speak fully in favor of structure (II). Among the decomposition products of this salt there were found: dioxane, ethylene, ethylene iodide.

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79-28-5-18/69

Investigation of the Thermal Decomposition of the Reaction Products of Dioxane With Magnesium Iodide-Diether, Magnesium Iodide and the Mixture of Magnesium and Iodine. II. On the Chemistry of Oxonium Compounds

ethyl iodide, acetic anhydride, iodine and magnesium. After all the results of the reaction of dioxane with the mixture of magnesium and iodine prove that the latter as well as the ethers in this case do not react according to the scheme



as a high-melting dioxonium salt is formed here instead of the low-melting ethylene iodide. There are 2 Soviet references.

ASSOCIATION: Ural'skiy gosudarstvenny universitet (Ural' State University)

SUBMITTED: May 3, 1957

Card 3/3

5 (3)

AUTHORS:

Yesafov, V. I., Stashkov, L. I., Sirotkin, L. B.,  
Suvorov, A. L., Novikov, Ye. G.

SOV/79-29-3-20/61

TITLE:

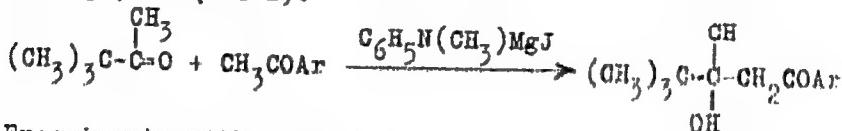
On the Characteristics of the  $\alpha,\beta$ -Unsaturated Ketones. VII  
(Kharakteristika  $\alpha,\beta$ -nepredel'nykh ketonov. VII)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 845-849 (USSR)

ABSTRACT:

The present paper is issued as first publication of experimental data on the hydrolytic cleavage of the aliphatic aromatic  $\alpha,\beta$ -unsaturated ketones containing an aryl radical which is directly combined with the carbonyl group. Ketones of this type were obtained by dehydration of the  $\beta$ -ketols which had been synthesized according to the method of Grignard, V. and Colonge, I. (Ref 2).



Experiments with respect to the hydrolytic cleavage of the  $\beta$ -ketols were carried out as well. The data of table 2 show that the  $\beta$ -ketols are far more unstable than the corresponding

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On the Characteristics of the  $\alpha,\beta$ -Unsaturated Ketones. VII

SOV/79-29-3-20/61

$\alpha,\beta$ -unsaturated ketones and prove to be more sensitive to very weak hydrolysis reagents. Besides, the behavior of the  $\beta$ -ketols in the hydrolysis differs from that of the  $\alpha,\beta$ -unsaturated ketones by the fact that a change of the NaOH-concentration exerts a slight influence upon the cleavage intensity of the  $\beta$ -ketols whereas the hydrolytic cleavage of the  $\alpha,\beta$ -unsaturated ketones is considerably influenced. The rate of hydrolysis of the aliphatic aromatic ketones investigated increases significantly when the NaOH concentration is increased from 0.01 to 0.1 n. 8  $\beta$ -ketols hitherto unknown were synthesized and described. It was determined how far the hydrolytic cleavage of the  $\beta$ -ketols and at the same time that of the  $\alpha,\beta$ -unsaturated ketones develops and it was proved that the latter separate but little HBr on bromination. There are 2 tables and 4 references, 2 of which are Soviet.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet (Ural State University)

SUBMITTED: February 18, 1958

Card 2/2

5(3)

AUTHOR:

Yesafov, V. I.

SOV/79-29-7-5/83

TITLE:

Synthesis of the Phenylated  $\alpha,\beta$ -Unsaturated Alcohols and the  
(1,3)-Diene Hydrocarbons.VIII (Sintez fenilirovannykh  $\alpha,\beta$ -  
-nepredel'nykh spirtov i diyenovykh (1,3) uglevodorodov.VIII)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2129-2132 (USSR)

ABSTRACT:

In order to solve the problems concerning the separation of  $HOMgX$  from the forming magnesium halide carbinolates (Refs 1-3), the reaction of 2,2,3-trimethyl-5-p-arylpenten-3-ones-5 ( $Ar=C_6H_5$ ,  $n=CH_3C_6H_4$ ,  $n=C_2H_5C_6H_4$ ), which may be present in cis- and trans-forms with  $MgX$  (Ref 4), are described here. The experiments showed that among the three homologous ketones 2,2,3-trimethyl-5-p-tolylpenten-3-one-5 produces the best yields in tertiary alcohols. These alcohols can be dehydrated only with difficulties. In the Grignard reaction the other two ketones mainly yielded diene hydrocarbons (1,3). This particular behavior might be explained also by the influence of a spatial factor. The phenylated diene hydrocarbons (1,3) of the structure (III) and (IV) obtained show, compared to the similar aliphatic compound (V) (Ref 3), a stronger stability of the double bond

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Synthesis of the Phenylated  $\alpha,\beta$ -Unsaturated  
Alcohols and the (1,3) Diene Hydrocarbons. VIII

SOV/79-29-7-5/83

in position 3,4 and may be brominated therefore only with the separation of a high amount of HBr. The following  $\alpha,\beta$ -unsaturated tertiary alcohols were newly synthesized and characterized: 2,2,3-trimethyl-5-p-tolylhexen-3-ol-5 and 2,2,3-trimethyl-5-p-tolylhepten-3-ol-5 as well as the phenylated diene hydrocarbons (1,3): 2-phenyl-4,5,5-trimethylhexadiene-1,3 and 2-p-ethyl-phenyl-4,5,5-trimethylhexadiene-1,3. It is assumed that the stability of the halogen magnesium carbinolates formed by Grignard reaction depends on  $\alpha,\beta$ -unsaturated ketones. There are 1 table and 4 Soviet references.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet (Ural State University)

SUBMITTED: March 17, 1958

Card 2/2

YESAFOV, V. I.

On the history of the origin of the stereochemical theory and  
the attitude of A.M. Butler and some of his contemporary West  
European chemists toward it. Trudy Inst.ist.est.i tekhn. 30:4-5.  
135-174 '60. (MIRA 13:8)

(Stereochemistry)  
(Butlerov, Aleksandr Mikhailovich, 1828-1886)

86499

53610 2209, 1373, 1153

S/079/60/030/011/004/026  
B001/B066

AUTHORS: Yesafov, V. I. and Yakunina, G. I.

TITLE: Chemistry of Onium Compounds. III. Investigation of Thermal Decomposition of the Reaction Products of Tetrahydrofuran,  $\alpha$ -Methyl Furan, Pyrrole, Thiophene With the Dietherate of Magnesium Iodide and With Magnesium Iodide

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11,  
pp. 3572-3576

TEXT: V. I. Yesafov (Refs. 1,2) showed in his papers that the etherate  $MgI_2 \cdot 2(C_2H_5)_2O$  is a very convenient agent for the relative estimation of the degree of aromaticity of the five-membered O-, N- and S-heterocyclic compounds. These heterocyclic compounds may be arranged in the following order on the basis of increasing difficulty in the release of the unshared electron pair of heteroatoms with formation of "onium compounds"; and for silvan, pyrrole, and thiophene with respect to the degree of stability increase of the electron sextet of heterocycles:

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86499

Chemistry of Onium Compounds. III. Investigation S/079/60/030/011/004/026  
of Thermal Decomposition of the Reaction B001/B066  
Products of Tetrahydrofuran,  $\alpha$ -Methyl Furan, Pyrrole, Thiophene With the  
Dietherate of Magnesium Iodide and With Magnesium Iodide



This order is further confirmed by the experimental data of thermal decomposition of the reaction products of the mentioned heterocyclic compounds with anhydrous magnesium iodide. Tetrahydrofuran forms with the latter a compound which decomposes on heating by cleaving the heterocycle (Ref. 5). Silvan and pyrrole give, only on heating with magnesium iodide, compounds which decompose at high temperature, also under cleavage of the heterocycles. Also on prolonged heating, thiophene does not react with magnesium iodide. It follows from this that furan and pyrrole, as well as their compounds, maintain the "benzoid-like" state of electrons in the heterocycles only at low temperatures; with increasing temperature, however, this state is disturbed, in which connection the unshared electron pairs of oxygen and nitrogen are set free, and stable onium compounds are formed with MgI:

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86499

Chemistry of Onium Compounds, III. Investigation 8/07/60/030/011/001/0R6  
 of Thermal Decomposition of the Reaction 8001/3066  
 Products of Tetrahydrofuran,  $\alpha$ -Methyl Furan, Pyrrole, Thiophene With the  
 Dietherate of Magnesium Iodide and With Magnesium Iodide



which also explains the decomposition of C- and N-heterocycles on heating. It was thus shown that 1) tetrahydrofuran displaces the diethyl ether from  $MgI_2 \cdot 2(O_2H_5)_2O$  to form  $MgI_2 \cdot 2O_4H_8O$  which is decomposed under cleavage of a molecule of tetrahydrofuran, that 2) silvan and pyrrole displace one molecule of ether from  $MgI_2 \cdot 2(O_2H_5)_2O$ , and give compounds with  $MgI_2$  which decompose under cleavage of the heterocycles, that 3) thiophene reacts neither with  $MgI_2 \cdot 2(O_2H_5)_2O$  nor with  $MgI_2$ . It is assumed that the participation of heteroatoms in the formation of heterocycles increases their capability of forming onium compounds. This assumption is supported by the fact that dioxane and tetrahydrofuran give with  $MgI_2$  stabler compounds than simple aliphatic ethers. G. I. Kusnetsova, I. T. Bel'skii,  
 Card 3/4

86499

Chemistry of Onium Compounds. III. Investigation 6/079/60/030/011/004/026  
of Thermal Decomposition of the Reaction Products of Tetrahydrofuran,  $\alpha$ -Methyl Furan, Pyrrole, Thiophene With the Dietherate of Magnesium Iodide and With Magnesium Iodide

and S. Z. Tayts are thanked for making available the samples. There are 11 references: 5 Soviet, 4 US, 2 British, and 2 German.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet (Ural State University)

SUBMITTED: August 16, 1959

card 4/4

YESAFOV, V.I.

Characteristics of diisotertiary  $\beta$ -glycols. Part 1. Zhur. ob. khim.  
30 no.10:3272-3275 O '61. (MIRA 14:4)

1. Ural'skiy gosudarstvennyy universitet.  
(Glycols)

YESAFOV, V. I.

35276

S/190/62/C04/C06/002/026  
B101/B110

15. 82 20

AUTHORS: Tager, A. A., Suvorova, A. I., Goldyrev, L. N., Yesafov,  
V. I., Berestova, V. L.

TITLE: Effect of the chemical structure of the plasticizer on the  
vitrification temperature of polymers. I. Plasticizing of  
polystyrene with diphenic acid and naphthalic acid esters

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962,  
803-808

TEXT: Thermomechanical curves were plotted for polystyrene (PSt)  
plasticized with 25 mole% of: monomethyl-, monoethyl-, and monobutyl  
diphenate; dimethyl-, diethyl-, ethyl-butyl-, dibutyl-, ethyl-octyl-, and  
diheptyl diphenate; dimethyl, diethyl, and dibutyl naphthalate. The  
synthesis of ethyl-butyl diphenate (b.p. 167-168°C/15 mm Hg, MR 91.89)  
and of ethyl-octyl diphenate (MR 110.57), now produced for the first time,  
will be published. The compatibility of the plasticizer with PSt was  
studied on the basis of the critical mixing temperature, which lay at  
100-130°C with diphenic acid monoester, below room temperature (sometimes

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S/ 90/62/C04/C06/C02/C26  
B101/B110

Effect of the chemical structure ...

at  $\sim -50^{\circ}\text{C}$ ) with esters of this acid, and at room temperature with naphthalates. Results: (1) The vitrification temperature,  $T_v$ , of plasticized PSt drops with increasing compatibility. Pure PSt had  $T_v = 105^{\circ}\text{C}$ , PSt with monoesters had  $T_v = 40-70^{\circ}\text{C}$ , PSt with diphenic acid diesters yielded the lowest  $T_v$ .  $T_v$  dropped with increasing length of the alkyl radical: ethyl-octyl diphenate yielded  $T_v = -11^{\circ}\text{C}$ ; the naphthenates showed a low effect ( $T_v = 9-48^{\circ}\text{C}$ ). (2) With increasing content of  $\text{CH}_2$  links in the alkyl radical,  $T_v$  of diphenic acid diesters approaches a minimum at  $n_{\text{CH}_2} = 10-12$ , and then rises again. (3) The structure of the aromatic radical of the plasticizer affects  $T_v$ : diphenates (and phthalates) plasticize more intensively than naphthalates. There are 3 figures and 2 tables.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo  
(Ural State University imeni A. M. Gor'kiy)

SUBMITTED: March 21, 1961

Card 2/2

YESAFOV, V.I.

38277

S/190/62/004/C06/003/026  
B101/B110

15.2.2.20

AUTHORS: Tager, A. A., Suvorova, A. I., Goldyrev, L. N., Yesafov, V. I.,  
Topina, I. P.

TITLE: Effect of the chemical structure and the size of the  
plasticizer molecule on the vitrification temperature of  
polymers. II. Plasticizing of polymethyl methacrylate with  
esters of diphenic and naphthalic acids

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 809-814

TEXT: Thermomechanical curves were plotted for polymethyl methacrylate (PMMA) plasticized with 25 mole% of: monomethyl, monoethyl, and monobutyl diphenate; dimethyl, diethyl, ethyl-butyl, dibutyl, and diheptyl diphenate; dimethyl, diethyl, and dibutyl naphthalate. Results: (1) The better the compatibility between polymer and plasticizer, the greater the drop in the vitrification temperature,  $T_v$ , of pure PMMA ( $T_v = 100^\circ\text{C}$ ).

(2)  $T_v$  dropped with increasing length of the alkyl radicals of the diphenates down to a minimum ( $-9^\circ\text{C}$ ). (3) Monesters of diphenic acid and naphthalates showed a lower plasticizing effect ( $T_v \sim 50^\circ\text{C}$ ). (4) The

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S/19C/62/004/006/003/026  
B101/B110

Effect of the chemical structure ...

structure of the aromatic radical affects the plasticizing effect. The better plasticizing of diphenates is explained by the ability of the compound to be turned round the C-C bond between the two benzene rings. In the case of monoesters, the free COOH reduces the compatibility. (5) The molar concentration rule does not apply to the polymer plasticizer systems investigated. There are 5 figures and 1 table.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo  
(Ural State University imeni A. M. Gor'kiy)

SUBMITTED: March 21, 1961

Card 2/2

YESAFOV, V.I.

History of the discovery of organic reactions in the presence  
of anhydrous aluminum halides. Trudy Inst.ist.est.i tekhn.  
39:104-140 '62. (MIRA 16:2)  
(Friedel-Crafts reaction)

YESAFOV, V.I.; SHITOV, G.P.

Characteristics of primary-tertiary  $\beta$ -glycols. Part 3. Zhur. ob.-  
khim. 32 no.9:2819-2822 S '62. (MIRA 15:9)

1. Ural'skiy gosudarstvennyy universitet.  
(Glycols)

YESAFOV, V.I.; ZHUKOVA, L.P.

Characteristics of secondary-tertiary  $\beta$ -glycols. Part 2.  
Zhur.ob.khim. 32 no.9:2816-2819 S '62. (MIRA 15:9)

1. Ural'skiy gosudarstvennyy universitet.  
(Glycols)

YESAFOV, V.I.; DASHKO, V.N.; MAREK, E.M.

Characteristics of secondary-tertiary  $\beta$ -glycols. Part 5. Zhar.  
b. khim. 34 no.12:4094-4096 D '64 (MIRA 18:1)

1. Ural'skiy gosudarstvennyy universitet.

USSR / Human and Animal Physiology (Normal and Pathological).  
Lymph Circulation.

T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60370

Author : Yesakov, A. I.

Inst : Not given

Title : Investigation of the "Automatic" Action of the Center  
of Lymphatic Hearts

Orig Pub : Zh. obshch. biologii, 1957, 18, No 3, 185-193

Abstract : The contraction of the posterior lymph hearts (LH) in a frog was recorded on a kymograph. The warming of the spinal cord with a thermode on the level of the III vertebra produced an increase in the contraction rate; the destruction of the cord on that level did not interrupt the rhythmical action of LH. It was stopped only when the spinal cord was destroyed at the VII vertebra. The rhythmic activity of LH originates in the

Card 1/2

Y.SAKOV,A.I., Card. Biv. Sci.—(disc) "Study of the recesses ~~surfaces~~ of the so-called automatic excitability of lymphatic hearts." Mos., 1958.  
14 pp (Mos Order of Lenin and Order of Labor Red Banner St. to V. I. U. V. Lomonosov), 150 copies

— 5 —

YESAKOV, A.I.

Metabolic factors of automatism (exemplified by the cerebrospinal center of lymph hearts). Zhur. ob. biol. 20 no.1:28-34 Ja-F '59.  
(MIRA 12:2)

1. Kafedra fiziologii shivotnykh Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.  
(LYMPHATICS) (SPINAL CORD) (PHYSIOLOGICAL CHEMISTRY)

SNYAKIN, P.G., prof.; YESAKOV, A.I., kand.biolog.nauk

Muscular sense. Zdorov'e 7 no.9:9-10 S '61.  
(MUSCULAR SENSE)

(MIRA 14:9)

YESAKOV, A.I.

Metabolic nature of the automatism of nerve cells as exemplified  
in the spinal center of the lymph heart. Zhur. ob. biol. 22 no.2:  
136-143 Mr-Ap '61. (MIRA 14:5)

1. Department of Animal Physiology, State University of Moscow.  
(NERVES)

YESAKOV, A.I.

Problems of the efferent regulation of receptors; based on an example of lingual chemoreceptors. Biul.eksp. biol. i med. 51 no.3: 3-8 Mr '61. (MIRA 14:5)

1. Iz laboratorii fiziologii i patologii organov chuvstv (zav. - prof. P.G.Snyakin) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.V.Parin) AMN SSSR, Moskva. Predstavlena deystvitel'stva chlenom AMN SSSR P.K.Anokhinyem.  
(RECEPTORS (NEUROLOGY)) (STOMACH)  
(TONGUE)

YESAKOV, A. I.

"Methodology of neurodynamic investigations and practical work  
in the physiology of human analysors" by P. O. Makarov. Reviewed  
by A. I. Esakov. Nauch. dokl. vys. shkoly; biol. nauki no.3:  
208-209 '62. (MIRA 15:7)

(SENSES AND SENSATION) (PHYSIOLOGY--LABORATORY MANUALS)  
(MAKAROV, P. O.)

SNYAKIN, P. G., prof.; YESAKOV, A. I., kand. biologicheskikh nauk

Our habits are stereotypes. Zdorov'e 8 no.11:4-5 II '62.  
(MIRA 15:10)

(HABIT)

YESAKOV, A.I.

Effect of the sympathetic nervous system on the electric activity of tongue receptors. Trudy Inst. norm. i pat. fiziol. AMN SSSR 6:63-65 '62 (MIRA 17:1)

1. Laboratoriya fiziologii i patologii organov chuvstv (zav.-prof. P.G. Snyakin) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.

YESAKOV, A.I.; ZAYKO, N.S.

Effect of guanidine on the functional activity of taste  
receptors. Fiziol. zhur. 49 no.8:984-989 Ag '63.  
(MIRA 17:2)

1. From the Laboratory for Physiology and Pathology of Sense  
Organs, Institute of Normal and Pathologic Physiology,  
U.S.S.R. Academy of Medical Sciences, Moscow.

YESAKOV, A.I.

Reflex regulation of "spontaneous" activity of tongue chemo-receptors. Biul. eksp. biol. i med. 56 no.8:7-11 Ag '63.

(MIRA 17:7)

1. Iz laboratorii fiziologii i patologii organov chuvstv (zav. - prof. P.G. Snyakin) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR prof. V.V. Parin) AMN SSSR, Moskva. Predstavлено deystvitel'nym chlenom AMN SSSR P.K. Anokhinyem.

YESAKOV, A.I.

Efferent reactions in the hypoglossal nerve. Biul. eksp. biol. i med.  
56 no.11:15-18 0 [i.e. N ] '63. (MIRA 17:11)

1. Iz laboratori fiziologii i patologii organov chuvstv (zav. - prof.  
P.G. Snyakin) Instituta normal'noy i patologicheskoy fiziologii (dir.-  
deystvitel'nyy chlen AMN SSSR prof. V.V. Parin) AMN SSSR, Moskva.

YESAKOV, A.I.

Electrophysiological analysis of the functional mobility and of  
processes regulating the taste receptor apparatus. Trudy Inst.  
norm. i pat. fiziologii AMN SSSR 7:43-44 '64. (MIRA 18:6)

1. Laboratoriya fiziologii i patologii organov chuvstv (zav. -  
prof. P.G.Snyakin) Instituta normal'noy i patologicheskoy fiziologii  
AMN SSSR.

YESAKOV, A.I. (Moskva)

Role of different regulation levels of receptors in the  
perception process. Vest. AMN SSSR 21 no.1:62-68 '66.  
(MIRA 19:1)

YESAKOV, A.I.; FILIN, V.A.

Physiological characteristics of the functioning of the taste  
receptor apparatus. Fiziol. zhur. 50 no.2:169-176 F '64.

(MIRA 18:2)

1. Laboratoriya fiziologii i patologii organov chuvstv Instituta  
normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.

YESAKOV, A.I.

Possible specific stimulus of the "automatic" center of the lymph  
heart. Biul. eksp. biol. i med. 57 no.6:19-22 Je '64.

(MIRA 18:4)

1. Kafedra fiziologii zhivotnykh Moskovskogo gosudarstvennogo  
universiteta imeni Lomonosova.

1940, 11, 11

YUR'YEV, YU.K.; BAZAN, V.I.; YESAFOVA, A.N.; SELIVERSHOVA, S.N. AND CHERNYAKHOVER, S.I.

"The Catalytic Transformations of Heterocyclic Compounds" Part XVI. "Synthesis of Certain Pyridine and Quinoline Derivatives of Pyrrolidine" Zhur Obshch. Khim. 10, No. 21, 1940. Moscow Order To Lenin State University imeni M.V.Lomonosova, Laboratory of Organic Chemistry imeni Academician N. D. Zelinskij. Received 26 May 1940.

U-1612, 3 Jan. 1952

YESAKOV, I.S.; YASHCHENKO, Z.G.

Interpreting vertical electric sounding curves by the T method.  
Razved. i prom. geofiz. no.30:50-54 '59. (MIRA 12:12)  
(Electric prospecting)

YASHCHENKO, Z.G.; YESAKOV, I.S.

Use of electric prospecting in studying the elastic properties  
of igneous rocks. Razved.i prom.geofiz. no.33:23-29 '59.  
(MIRA 13:4)

(Rocks--Electric properties) (Elasticity)

YESAKOV, V.A.

M.S.Bodnarskii; obituary. Izv.AM SSSR Ser.geog. no.1:95-96  
Ja-F '54. (MLRA 7:2)  
(Bodnarskii, Mitrofan Stepanovich, 1870-1953)

USSR/Geography Education

Card : 1/1 Pub. 45 - 8/20

Authors : Esakov, V. A.

Title : History of the origination of geography faculties at Russian universities

Periodical : Izv. AN SSSR. Ser. geog. 4, 57 - 60, July - August 1954

Abstract : History of the establishment of geography faculties at Russian universities since the second half of the 19th century.

Institution : Acad. of Sc. USSR, Institute of Natural History and Technique

Submitted : .....

YESAKOV, V.A.  
USSR/Geophysics - Moscow University

FD-1152

Card 1/1 Pub. 129-16/23

Author : Yesakov, V. A.

Title : From the history of geography in Moscow University (up to the establishment of the chair of geography in 1884)

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No 7, 131-136, Oct 1954

Abstract : The Petersburg Academy of Sciences, founded in 1725, established in 1739 its Geographical Department. The author lists the numerous studies and expeditions undertaken after this date.

Institution :

Submitted : May 22, 1954

YESAKOV, V.A.; SOLOV'YEV, A.I., redaktor; VOLODINA, N.I., redaktor;  
~~ZEMTSEKOVA, T.A.~~, tekhnicheskiy redaktor

[D.N. Anuchin and foundation of the Russian academic geographical school.] D.N. Anuchin i sozdanie russkoj universiteteskoi geograficheskoi shkoly. Moskva, Izd-vo Akademii nauk SSSR, 1955. 180 p.  
(Anuchin, Dmitrii Nikolaevich, 1843-1923) (MLRA 8:10)

YESAKOV, V.A.

M.I. Veniukov's correspondence with N.M. Przheval'skii.  
Vop. ist.est. i tekhn. no.1:207-212 '56. (MLRA 9:10)

(Veniukov, Mikhail Ivanovich, 1832-1901)  
(Przheval'skii, N.M.)

3(0)

SOV/10-59-3-21/32

AUTHOR: Yesakov, V.A.

TITLE: Scientific Contacts of A. Humboldt with Russian Scientists

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959,  
Nr 3, pp 124-130 (USSR)

ABSTRACT: This is a review of scientific contacts of A. Humboldt with  
Russian scientists. There is 1 photograph, and 18 references,  
of which 15 are Russian and 3 German.

ASSOCIATION: Institut istorii yestestvoznaniya i tekhniki AN SSSR (the  
Historical Institute of the Science of Natural History and Tech-  
nology, AS USSR).

Card 1/1

30

SOV/1C-59-4-28/29

AUTHOR: Yesakov, V.A.

TITLE: A. Humboldt's Anniversary in the USSR

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya  
1959, Nr 4, p 158 (USSR)

ABSTRACT: The article is concerned with the 100th anniversary  
of the death of A.v. Humboldt in the USSR. The  
following personalities and organizations partici-  
pated in the commemoration of the great German scien-  
tist: Academician D.I. Shcherbakov, Corresponding  
Member AN SSSR (AS USSR), S.V. Kalesnik, Academician  
A.A. Grigor'yev, Corresponding Member AS USSR S.V.  
Obruchev, the Akademiya nauk SSSR (Academy of Sciences  
USSR), the Geograficheskoye obshchestvo SSSR (Geo-  
graphical Society USSR), the Glavnaya geofizicheskaya  
observatoriya im. A.I. Voyeykova (Central Geophysical  
Observatory imeni A.I. Voyeykov), the Astronomiches-  
kiy institut imeni P.K. Shternberga (Institute of

Card 1/3

SCV/10-59-4-23/29

A. Humboldt's Anniversary in the USSR

Astronomy imeni P.K. Shternberga), the Vsesoyuznoye botanicheskoye obshchestvo (All-Union Botanical Society), the Otdeleniye geologo-geograficheskikh nauk (Section of Geological and Geographical Sciences) AS USSR, the Institut istorii yestestvoznaniya i tekhniki (Institute of History of the Natural Sciences and Technology), the Sovetskoye natsional'noye obyedineniye istorikov yestestvoznaniya i tekhniki (Soviet National Association of Historians of Natural Sciences and Technology), the Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov), the Moskovskoye obshchestvo ispytateley prirody (Moscow Society of Naturalists), Obshchestvo sovetsko-germanskoy druzhby i nauchnykh svyazey (Soviet-German Society for the Promotion of Friendship and Scientific Connections), the Gosudarstvennyy istoricheskiy muzey (State Historical Museum), the Gosudarstvennyy muzey

Card 2/3

SOT/10-59-4-28/29

A. Humboldt's Anniversary in the USSR

izobrazitel'nykh iskusstv (State Museum of Graphic Arts), the Muzey zemlevedeniya MGU (Geographical Museum MGU), the Gosudarstvennoye izdatel'stvo geograficheskoy literatury (State Publishing House of Geographical Publications) and the Ministerstvo svyazi SSSR (Ministry of Communications USSR). There is 1 Soviet reference.

Card 3/3

YESAKOV, V.A.; SOLOV'YEV, A.I.; FEDOSEYEV, I.A., otv. red.;

[Russian geographical explorations of European Russia and  
the Urals in the 19th and the beginning of the 20th century]  
Russkie geograficheskie issledovaniia Evropeiskoi Rossii i  
Urala v XIX - nachale XX v. Moskva, Nauka, 1964. 177 p.  
(MIRA 17:11)

NAUMOV, Guriy Vasil'yevich; FEDOSEYEV, I.A., otd. red.; YESAKOV,  
V.A., red.; SOLOV'YEV, A.I., red.

[Russian geographical explorations in Siberia in the 19th  
century] Russkie geograficheskie issledovaniia Sibiri v  
XIX - nachale XX v. Moskva, Nauka, 1965. 146 p.  
(MIRA 19:1)

YESAKOV, V.A.; PLAKHOTNIK, A.F.; ALEKSEYEV, A.I.; FEDOSEYEV, I.A.,  
otv. red.; SOLOV'YEV, A.I., red.

[Russian ocean and sea studies in the 19th to the begin-  
ning of the 20th century] Russkie okeanicheskie i morskie  
issledovaniia v XIX-nachale XX v. Moskva, Nauka, 1964.  
158 p. (MIRA 18;1)

YESAKOV, Vasiliy Petrovich; PARFENOV, Eduard Yevgen'yevich;  
PROZOROV, Valentin Alekseyevich; LERNER, D.M., red.

[Automated electric drive systems with regulated semi-conductor rectifiers] Sistemy avtomatizirovannogo elektroprivoda s upravliaemymi poluprovodnikovymi vypriamiteliами.  
Leningrad, 1964. 35 p. (MIRA 17:11)

LESAKOV, V.P., inzhener.

Operating conditions of electric winches on ships. Sudostroenie  
23 no.3:34-35 Mr '57. (MLRA 10:5)  
(Winches) (Electricity on ships)

YESAKOV, V.P., kand.tekhn.nauk

Systems for electric propelling units using steady current. Sudostroenie  
25 no.2:31-34 F '59.  
(MIRA 12:4)  
(Electricity on ships)

L 33115-66

ACC NR: AP6024083

SOURCE CODE: UR/0144/66/000/002/0235/0236

AUTHOR: Zav'yalov, A. S.; Got'man, A. A.; Molchanov, V. D.; Krasuk, N. P.;  
Agranovskiy, K. Yu.; Berger, A. Ya.; Groyer, L. K.; Yesakov, V. P.; Miller, Ye. V.;  
Pyatman, K. I.; Abryutin, V. M.; Gubanov, V. V.; Oranskiy, M. I.; Yevseyev, M. Ye.;  
Herkin, G. B.; Sinol'nikov, Ye. M.; Avilov-Karnaukhov, B. N.; Bogush, A. G.;  
Bolyayev, I. P.; Pekker, I. I.; Chernyavskiy, F. I.

46  
B

ORG: none

TITLE: O. B. Bron (on his 70th birthday)

SOURCE: IVUZ. Elektromekhanika, no. 2, 1966, 235-236

TOPIC TAGS: electric engineering personnel, circuit breaker

ABSTRACT: Osip Borisovich Bron was born in 1896 in Klintsi. In 1920, he graduated from the physics-math faculty of Khar'kov Technological Institute. He became a professor in 1930. He defended his doctor's thesis in 1940. During the second world war, he was in the navy. After demobilization in 1950, Engineer Colonel Bron went to work teaching at the Leningrad Industrial Correspondence School. He became the head of the Chair of Theoretical Bases of Electrical Technology in 1958. He is closely associated with scientific and development work, and has cooperated closely in this area with the Leningrad "Elektrosila" plant since 1946. His work has been in the areas of spark-damping and high-power circuit breakers. He has published over 140 scientific works and 19 inventions. [JPRS]

SUB CODE: 05, 09 / SUBM DATE: none

Card 1/1

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77094  
307/62-50-12-38/43

AUTHORS: Zhuze, T. P., Zhurba, A. S., Yesakov, Ye. A.

TITLE: Brief Communications. Investigation of P-V-t-N Relation and Phase Equilibrium in Ethylene-Cyclohexane System

PERIODICAL: Izvestiya Akademii nauk. Otdeleniye khimicheskikh nauk, 1959, Nr 12, pp 2251-2253 (USSR)

ABSTRACT: Investigation of binary systems of unsaturated gases and paraffins, naphthenes, and aromatic hydrocarbons, presents great practical interest in view of the high solubility of the latter in compressed unsaturated gases. P-V-t-N relationship of the ethylene-cyclohexane system was studied by the authors in a modified apparatus described by Sage and Lacey (Trans. Amer. Inst. Mining Met. Engrs., 1940, Nr 136, p 138). Isotherms  $V = f(p)t$  were traced in the range from 30 to 150° for ethylene-cyclohexane mixtures with 20 to 85 molar % ethylene, at pressures ranging from 10 atm to pressures somewhat above the saturation point of each mixture. Saturation pressures and the corresponding specific volumes were determined from these isotherms, and dew point pressures were established in a series of separate experiments.

Card 1/3 2

Brief Communications. Investigation of  
P-V-t-N Relation and Phase Equilibrium  
in Ethylene-Cyclohexane System

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SOV/62-59-12-38/A3

Data thus obtained, served to trace isotherms  $p = f(N)t$  (where  $N$  is the molar share of ethylene dissolved in cyclohexane); isotherms of the equilibrium constant for ethylene and cyclohexane,  $K = f(P)t$ ; and isotherms of molar volumes  $V_M$  of the binary system plotted against molar share  $N_2$  of ethylene at 50 atm. In this manner, the composition of the coexisting phases, the equilibrium constants of ethylene and cyclohexane at pressures up to 100 atm, and the molar volumes of mixtures at their saturation pressures, were determined in the temperature range from 30 to 125°. Molar volume isotherms at low temperatures were practically linear up to  $N_2 = 0.65$ ; at higher temperatures, the molar volume increases sharply starting with  $N_2 = 0.50$ . There are 3 figures; and 3 references, 1 U.S., 2 Soviet. U.S. reference is: B. H. Sage, W. N. Lacey, Trans. Amer. Inst. Mining. Met Engrs., 136, 138 (1940).

Card 2/32

Inst. Geology & Processing Thermal Fuels A5 U.S.S.R.

ZHUZE, T.P.; YUSHKEVICH, G.N.; USHAKOVA, G.S.; YESAKOV, Ye.A.

Critical parameters for oil and oil-gas systems. Neft.  
khoz. 41 no.6:25-31 Je '63. (MIRA 17:6)

AFANAS'YEVA, V. B.; YESAKOVA, N. P.

Relation between the snow cover and G. J. Wangenheim's types  
of circulation. Trudy GGO no.151:77-80 '64. (MIRA 17:7)

ACCESSION NR: AT4046059

S/2531/64/000/166/0182/0188

AUTHOR: Yudin, M.I.(Doctor of physico-mathematical sciences); Yesakova, N. P.; Afanas'yeva, V. B.

TITLE: Preliminary evaluation of the prognostic significance of the information obtained from meteorological satellites

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy\*, no. 166, 1964. Voprosy\* interpretatsii dannykh meteorologicheskikh sputnikov (Problems in the interpretation of data of meteorological satellites), 182-188

TOPIC TAGS: meteorology, meteorological satellite, cloud, precipitation, weather forecasting, long-range weather forecasting, snow cover, radiation balance

ABSTRACT: The objective of this paper was to develop a method for the preliminary characterization of anomalies of cloud cover, the radiation balance of the underlying surface and the limits of snow and ice cover for subsequent use of such characteristics in long-range weather forecasting. The authors establish statistical relationships between such anomalies and the characteristics of future weather (temperature and precipitation); certain direct characteristics of atmospheric circulation are also analyzed in relation to future weather. Determination of the characteristics of anomalies of the cloud cover,

Card 1/3

ACCESSION NR: AT4046059

the boundaries of the snow and ice cover and the radiation balance was done using mean 10-day values for the period September-November 1948-1957. These values were mapped, after which the parameters characterizing the fields of individual elements were determined. The method used for constructing the maps and defining the characteristics of anomalies is described briefly. The state of atmospheric circulation was described using the zonal index devised by Ye. N. Blinova, the M. I. Yudin meridional index and the A. A. Rozhdestvenskij hydrodynamic indices. These parameters were used to supplement the 10-day means of temperature and precipitation for an analysis of these values determined for a grid of points covering much of the European SSSR. Synchronous statistical relationships were established between the 10 mentioned parameters; asynchronous prognostic relationships also were determined. The ten considered parameters were correlated with temperature and precipitation for the 10 days which followed. The computations of the correlation coefficients were performed on a "Ural-1" electronic computer. Most of the results of the computations were plotted on maps, and 66 such maps were constructed. In a considerable number of cases relationships were discovered which are characterized by quite high correlation coefficients and with a stable identical

ACCESSION NR: AT4046059

sign for the entire considered area. It was found that the selected parameters generally give more information for prediction of temperature than for prediction of precipitation. However, an absence of prognostic relationships is noted on a number of maps. The method described made it possible to establish a number of parameters of the state of the atmosphere and the underlying surface which are quite closely related to the characteristic of future weather for 10 days in advance. The greater part of the parameters apply to those elements which cannot be determined globally except by use of meteorological satellites. This emphasizes the great importance of satellite observations for long-range forecasting. Orig. art. has: 2 formulas, 5 figures and 1 table.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya Leningrad (Main Geophysical Observatory)

SUBMITTED: 00

ENCL: 00

SUB CODE: ES

NO REF SOV: 006

OTHER: 000

Card 3/3

AFANAS'YEVA, V.B.; YESAKOVA, N.P.

Statistical relations between the anomalies of certain  
weather characteristics. Trudy GGO no.165:105-113 '64.  
(MIRA 17:9)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962920002-0

AFANAS'YEVA, V.B.; YESAKOVA, N.P.

Relation of the shift of the boundary of snow cover to the G.IA.  
Vangengeim types of circulation in the spring period. Trudy GGO  
no.168:45-48 '65.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962920002-0"

YUDIN, M.I.; YESAKOVA, N.P.; AFANAS'Yeva, V.B.

Preliminary evaluation of the prognostic significance of  
information returned by meteorological satellites. Trudy  
GGO no.166:182-188 '64.

(MTRA 17:11)

YESAKOVA, R.

Objective method for determination of the liming stage of gelatin stock. R. Gorodetskaya, M. Sheremet, M. Shakhnazarova, D. Virnik, V. Smirnova, and R. Yesakova. Myasnaya Ind. S. S. S.R. 25, No. 5, 52-4(1954). —The procedure for detg. the status of the liming of gelatin stock is based on extg. a sample and detg. extd. gelatin colorimetrically by means of the biuret reaction. Results are given for extractable gelatin in bone stock at 5-day intervals for 40 days of liming. Total extractable gelatin is detd. for various bones and other gelatin stock.

M. M. Piskur

GORODETSKAYA, R.V., kandidat khimicheskikh nauk; SHAKHNAZAROV, M.Sh.,  
mladshiy nauchnyy sotrudnik; SHEREMET, N.V.; VIRENIK, D.I.;  
SMIRNOVA, V.Ye.; YESAKOVA, R.

Reducing losses in gelatin production. Trudy VNIIMP no.7:108-113  
'55.  
(MLRA 9:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti (for Gorodetskaya, Shakhnazarova, Sheremet); 2. Moskovskiy zhelatinovyj zavod (for Virenik, Smirnova, Yesakova).  
(Gelatin)

GORODETSKAYA, R.V., kandidat khimicheskikh nauk; SHAKHNAZAROVA, M.Sh.,  
mladshiy nauchnyy sotrudnik; SHEREMET, N.V.; VIRNIK, D.I.;  
SMIRNOVA, V.Ye.; YESAKOVA, R.

Methods of determining the degree of liming in gelatinous tissues.  
Trudy VNIIMP no.7:114-122 '55.  
(MLRA 9:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promy-  
shlennosti (for Gorodetskaya, Shakhnazarova, Sheremet); 2. Moskov-  
skiy zhelatinovyj zavod (for Virnik, Smirnova, Yesakova).  
(Gelating)